

REMARKS

Claims 4-13, 15-40 and 42-51 are pending in this application. Claims 1-3, 14 and 41 have been canceled. Claims 4-8, 20 and 42-47 have been amended to recite the subject matter of cancelled claim 14. Support for the amendment to claims 20 and 47 can be found in the specification at page 40, second full paragraph to page 41, fourth full paragraph.

No new matter has been added by way of the above-amendment.

[I] Prior Art Based Issues

Claims 4-13, 15-40, and 42-51 are rejected under 35 USC 103(a) as being obvious over EP 974617 (EP '617) in view of EP 976782 (EP '782). Applicants respectfully traverse the rejection.

Applicants note that the Examiner had previously rejected the claims based on this combination of references in the section numbered as "8" on page 4 of the June 23, 2004 Office Action. However, in view of the fact that the Examiner has included a different set of claims in this rejection, the Examiner has made the outstanding Office Action **nonfinal**.

[I - A] Claims 4 to 19, 38 to 40 and 42 to 46:

Applicants note with appreciation that the Examiner has indicated that claim 14 contains allowable subject matter, i.e., a foamed laminate comprising a substrate layer comprising an

ethylenic thermoplastic elastomer (A) obtained under a dynamic heat treatment in the absence of a cross-linking agent. In view of the fact that Applicants have amended independent claims 4-8 and 42-46 to recite the subject matter of claim 14, the rejection over claims 4-19, 38-40 and 42-46 is rendered moot.

Furthermore, such an inventive feature provides practical advantages as described in lines 3-17 on page 30 of the original English specification of the present invention and would have not been obvious to a skilled artisan from the combination of EP '617 and EP '782, since these cited references fail to teach or fairly suggest such a technical measure.

While EP '782 discloses that a crosslinked olefinic copolymer (A-3)(a) and a decomposable olefinic plastic resin (A-3)(b) are subjected to dynamic crosslinking in the presence of a crosslinking agent and the resulting product is used as a thermoplastic elastomer, there is no suggestion to subject a mixture of polyethylene resin (a-1) and copolymer based on ethylene/ $\alpha$ -olefin (a-2) to a dynamic heat treatment in the absence of a crosslinking agent to obtain an ethylenic thermoplastic elastomer (A) as in the present invention. As disclosed in the sections [0030] and [0037] of EP '782, the crosslinked olefinic copolymer (a) obtained in the presence of a crosslinking agent reveals a deteriorated flowability and the decomposable olefinic plastic resin (b) exhibits an increased flowability.

Moreover, there is no teaching or suggestion in EP '782 that such an ethylenic thermoplastic elastomer exhibits superior properties when used as the substrate element of a laminated product.

According to the present invention, the process step of admixing a crosslinking agent to the elastomer composition is dispensed with and an olefinic foamed laminate which can be recycled is provided at a lower cost, as described in lines 3-17 on page 30 of the original English specification. EP '782 fails to teach or suggest such an advantage.

As explained above, inventive claims 4 to 19, 38 to 40 and 42 to 46 define a product providing technical advantages by the exclusion of any working step using a crosslinking agent and the realization of obtaining, at lower cost, an olefinic foamed laminate which permits recycled use, and which is superior in the elasticity, appearance, abrasion resistance and fastness. Accordingly, the present invention of claims 4 to 19, 38 to 40 and 42 to 46 would not be obvious to a person skilled in the art by the combination of EP '782 with EP '617.

[I - B] Claims 20, 27 to 35, 37 and 47:

The ultrahigh molecular weight polyolefin resin (Y) to be used as the skin layer of foamed laminate defined by claims 20 and 47 is not a thermoplastic elastomer obtained by complete or partial

crosslinking and is different from the olefinic thermoplastic elastomer (A) of EP '617.

By using an ultrahigh molecular weight polyolefin resin having an intrinsic viscosity  $[\eta]=3.5-8.3$  dl/g as the skin layer, an olefinic foamed laminate exhibiting superior abrasion resistance and fastness or durability can be obtained. Therefore, the ultrahigh molecular weight polyolefin resin (Y) of the present invention is clearly distinct from the material of the skin layer described in EP '617, so that one skilled in the art would not be motivated to combine the teachings of EP '782 with the teachings of EP '617 to reach the formed laminate defined in claims 20 and 47 of the present invention. While EP '617 discloses in the section [0103] thereof an ultrahigh molecular weight polyethylene as a component of the resin composition for the skin layer, as pointed out in the Office Action, such an ultrahigh molecular weight PE has to be used together with the other indispensable components, namely, crosslinked olefinic thermoplastic elastomer (A), the higher viscosity polysiloxane (B) and the lower viscosity polysiloxane (C), as defined in claim 1 of EP '617. Thus, the skin layer constituted of a resin composition taught in EP '617 is different from the skin layer made of the ultrahigh molecular weight polyolefin of the laminate according to the present invention, so that a person skilled in the art would not have found the skin layer of the laminate of the present invention obvious

from the teachings of EP '617.

Therefore, the foamed laminate defined in claim 20 and in the subclaims 27 to 35 and 37 dependent thereon of the present invention is patentable over EP '617 and EP 782. Also, the olefinic foamed laminate defined by claim 47 of the present invention is composed of such a skin layer made of the ultrahigh molecular weight polyolefin (Y) and, thus, is also patentable over the cited references.

[I - C] Claims 21 to 26, 36, and 48 to 51:

The foamed laminate defined by these claims is composed of a substrate layer consisting of a foamed body ( $X_{F2}$ ) made of an olefinic thermoplastic elastomer ( $X_2$ ) and a skin layer made of an olefinic thermoplastic elastomer composition (Z). By this combination of the foamed body of olefinic thermoplastic elastomer with the skin layer of olefinic thermoplastic elastomer composition, a foamed laminate superior in the abrasion resistance ("no wear found") and in the elasticity ("spongy hand touch") is obtained as shown by the evaluation results given in Tables 2 and 3 of the original English specification of the present invention. Such an unexpected advantageous effect is attained by the special combination of the specific substrate foam material with the specific skin layer material, which would not be obvious to a person skilled in the art from the teachings of EP '782 and EP

'617.

As the Examiner will recall, this argument was previously presented in Applicants' September 23, 2004 Amendment. Applicants maintain the position that the presently claimed invention is not made obvious by the combination of EP '617 and EP '782, in view of the fact that the present invention has unexpectedly superior properties to the laminate of EP '617. Specifically, Applicants' position is that the use of a foamed olefin core has unexpectedly superior properties to the core of EP '617 in view of the fact that EP '617 includes a solid core with respect to the amount of wear and the sponge touch of the inventive laminate.

In response to this argument, the Examiner states that this argument is not given patentable weight since nothing in the inventive claims specifies to "no wear found" and "spongy hand touch", see top of page 8 of the Office Action. Applicants respectfully submit that the Examiner's contention that there is a requirement that the present claims explicitly recite that the laminate has "no wear found" and a "spongy hand touch" is legally incorrect. Should the Examiner maintain this position, Applicants respectfully request that the Examiner cites authority for his position.

There is no requirement that the claims specify the specific properties of the product, so long as the properties would naturally flow from the laminate described in the claims. Since the

properties of "no wear found" and a "spongy hand touch" would naturally flow from the elements of the claims, it is not necessary that the claims explicitly recite these specific properties of the product.

Applicants now reiterate the arguments presented in the September 23, 2004 Amendment regarding the unexpected nature of the present laminate described in claims 21-26, 36 and 48 to 51 for the Examiner's convenience.

The present specification contains experimental evidence that shows the inventive foamed laminate has unexpectedly superior properties over the non-foamed laminate of the base reference to EP '617, and as such, even if a *prima facie* case of obviousness were to exist, the evidence obviates the *prima facie* case.

Applicants respectfully submit that the experimental evidence in the specification shows that the inventive foamed laminate containing a foamed body substrate layer has unexpectedly superior properties to the laminate of EP '617, which simply teaches that the core comprises a "thermoplastic elastomer" and does not teach or suggest that the thermoplastic elastomer is a foamed thermoplastic elastomer.

The following data is obtained from Table 2 on page 108 of the specification and is reproduced herein for the Examiner's convenience.

Table 2

	Assessment rank *)
Example 3-1	5
Comp. Example 3-1	3

Note \*): Assessment rank 5: almost no wear found  
 Assessment rank 3: partial wear found

The difference between Inventive Example 3-1 and Comparative Example 3-1 is that the laminate is formed with a non-foamed core in the comparative example, whereas in the inventive example it is prepared with a foamed core. Based on the muddy slurry friction test results, the Inventive Example 3-1 was assessed to have a rank of 5, which shows that almost no wear was found, whereas the Comparative Example 3-1 was found to have an assessment rank of 3, which showed partial wear.

Also, the flexibility of the foamed laminate was assessed and the results are shown in Table 3, which is reproduced herein for the Examiner's convenience.

Table 3

	Assessment rank *)
Example 3-2	5
Comp. Example 3-4	2

Note \*): Assessment rank 5: spongy hand touch  
 Assessment rank 2: some solid touch



The data from the above Table shows that the Comparative Example 3-4 laminate formed using a non-foamed core was assessed to have some solid touch, whereas the Inventive Example 3-2 laminate formed with a foamed core was assessed to have a spongy hand touch.

Applicants respectfully submit that even if a *prima facie* case of obviousness were to exist, the above experimental evidence shows that the inventive laminate containing a foamed core has unexpectedly superior properties to the laminate having a non-foamed thermo-plastic elastomer core as described in EP '617. Since there is no teaching or suggestion in EP '617 or EP '782 that having a foamed core would improve the properties of the laminate, these superior results would not be obvious and as such, the obviousness rejection is untenable.

Furthermore, no one can easily combine the teachings of EP '782 with those of EP '617 to attain the foamed laminate defined by the claims given above, since EP '617 is devoid of any mention as to the skin layer and EP '782 is silent as to the foamed body for the substrate layer.

In view of the foregoing, significant patentable distinctions exist between the present invention and the teachings of EP '617 and EP '782, and as such, withdrawal of the rejection is respectfully requested.

Conclusion

With the above remarks, Applicants believe that the claims, as they now stand, define patentable subject matter such that passage of the instant invention to allowance is warranted. A Notice to that effect is earnestly solicited.


Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), Applicants respectfully petition for one (1) month extension of time for filing a response in connection with the present application. The required fee of \$120.00 is attached hereto.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Garth M. Dahlen, Ph.D., Esq. (Reg. No. 43,575) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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